Web Quest on Muscles

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| **1.** | [**Types of Muscles**](http://umbc7.umbc.edu/~farabaug/sokolo2.html)  <http://umbc7.umbc.edu/~farabaug/sokolo2.html>  What are the 3 types of muscles?  How are they different?  List locations where you might find each type of muscle. |
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| **2.** | [**Microscopic parts of muscles**](http://umbc7.umbc.edu/~farabaug/sokolo2.html)  <http://umbc7.umbc.edu/~farabaug/sokolo2.html>  What energy transformation takes place in muscles?  Now scroll down to FUNCTIONAL ORGANIZATION OF SKELETAL MUSCLE.  What is a muscle cell made up of?  What is the basic unit of contraction? |
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| **3.** | [**Characteristics of muscles**](http://www.accessexcellence.org/AB/GG/muscle_Contract.html)  <http://library.thinkquest.org/5777/mus2.htm>  How do muscles keep you warm?  What happens to the size of a muscle when it contracts?  Click the **SKELETAL** button |
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| **4.** | [**The basics of a**](http://school.discovery.com/homeworkhelp/worldbook/atozscience/m/378440.html) **skeletal muscle** About how many different skeletal muscles are found in the human body?  Skeletal muscles usually link two \_\_\_\_\_\_\_\_\_\_ across a \_\_\_\_\_\_\_\_\_\_.  What happens to one of these bones when the muscle contracts?  What does it mean to say skeletal muscles are voluntary?  What is the difference between a superficial muscle and a deep muscle?  What two things do muscles need from you blood stream in order for them to do their job?  Click on the **BICEPS** button  Use the glossary to define the biceps muscle.  Click on the **BACK** button and then the **NEXT** button |
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| **5.** | [**The basics**](http://umbc7.umbc.edu/~farabaug/sokolo2.html) about smooth muscle.  Where are smooth muscles found?  How are these muscles arranged?  What does this arrangement enable them to do?  What does it mean to say smooth muscles are involuntary?  What is the strongest muscle in your body?\_\_\_\_\_\_\_\_\_\_\_\_\_ Is it a smooth muscle? How much force can be delivered by this muscle?  Click the **NEXT** button |
| **6**. | The **basics** about cardiac muscles.  What characteristic do these muscles share with skeletal muscle?  What do these muscles do?  How many times a day do they work together to accomplish a heart contraction? |
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| **7.** | [**What**](http://www.ptcentral.com/muscles/index.html#muscles) muscles move <http://www.ptcentral.com/muscles/index.html#muscles>  Click on Thigh, leg and foot  Click on FOOT  What muscle flexes your big toe?  What muscle flexes toes 2 through 5?  Click on Head and Neck  Click on Muscles of Facial Expression What muscles allow you to smile and frown?  What muscle enables you to give a kiss?  Click on Brachium antebrachium and hand  Click on Hand and wrist.  Which muscle lets you touch a finger with your thumb?  What is this action called? |
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|  | Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_  **A: Physiology of Muscle Contraction**  <http://lessons.harveyproject.org/development/muscle/grsphysw.html>   1. What do you call the smallest contractile unit of a muscle? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. Give another name for a muscle cell. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 3. What is the function of the sarcoplasmic reticulum? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 4. What cell organelle will produce energy for the cell? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 5. List 2 functions of fascia.   \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   1. Define the role of each fascia layer:  * Endomysium = * Perimysium = * Epimysium =   **B. Animation of muscle contraction**  <http://www.brookscole.com/chemistry_d/templates/student_resources/shared_resources/animations/muscles/muscles.swf>   1. Work your way through the tutorial and label the following diagram.       **C. Sarcomere Contraction**  <http://highered.mcgraw-hill.com/sites/0072437316/student_view0/chapter42/animations.html#>  \*Draw two sarcomeres… one that is relaxed and the other fully contracted.  **D. Myosin and Actin Action**  <http://www.sci.sdsu.edu/movies/actin_myosin_gif.html>  or  <http://staff.jccc.edu/aalarabi/muscle.htm>    \*Use the animation and your notes to describe the events of muscle contraction. You should include all key players (i.e. ATP, myosin head, actin, tropomyosin complex, ADP, calcium ions, etc).  YOUR DESCRIPTION SHOULD BE **THOROUGH**. |
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